112-3-5719

Computation of Limiting Overheating and Thermal Impairing (Cont.)

constant rated load); $kf = \dfrac{Se}{Sav}$ - curve form factor;

$\beta = \dfrac{Sav}{Sr}$ - average duty factor of the transformer,

where S_c - mean quadratic load; S_{av} - average load as plotted on a daily graph; S_r - rated power of transformer. The nomogram permits the following general conclusions to be drawn. 1. The most important factor in selecting transformer power is the thermal impairing of the insulation, not the limiting heating up temperature. 2. Insulation impairing close to the natural wear with a variable load can be obtained if temperature rises above the rated (105°) are permitted. 3. An increase in kf and β greatly increases the thermal impairing. The nomogram and load chart can be used for finding the degree of thermal impairing of transformer insulation, and for selecting transformer power on the basis of a definite thermal impairing factor of insulation.

ASSOCIATION: Novocherkassk Polytechnical Institute (Novocherkas. politekhn. in-t)

N.L.G.

Card 2/2

Kaynlov, G.M.

GITEL'SON, S.M.; KAYALOV, G.M.

Economic evaluation of methods of increasing cos φ in industrial
plants. Energ. biul. no.5:15-18 My '57.   (MIRA 10:6)
                          (Electric power)

KAYALOV, G.M.

On S.A. Kudriashov's remarks. Energ. biul. no.5:21-22 My '57.
(Electric power)   (Kudriashov, S.A.)   (MIRA 10:6)

AUTHOR: Kayalov, G.M.   SOV/90-58-1-1/9

TITLE: On Calculating the Reactive Electric Power Needed by In-
                 dustrial Electric Motors (K raschëtu potrebleniya reaktivnoy
                 elektroenergii promyshlennymi elektroprivodami)

ABSTRACT: Difficulties arise in the designing of industrial-plant
                 electric equipment and in the mising of the power factor.
                 These difficulties concern the calculation of reactive electric
                 power consumption. Experimental determination of the amounts
                 of reactive electric power needed by basic consumers (asyn-
                 chronous motors) also faces some difficulties. The author
                 therefore gives a formula which expresses the interdependence
                 between the reactive-power utilization factor on the one
                 hand, and the switch-in factor as well as the active-power
                 utilization factor on the other. He also gives another
                 variant of the same formula, applicable to an entire line of
                 motors. At the end he derives formulas applicable for cal-
                 culating the average power factor of asynchronous motors in

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SOV/90-58-1-1/9

On Calculating the Reactive Electric Power Needed by Industrial Electric
Motors

        correlation with switch-in factors and active-power utilization
        coefficients.
        There is 1 table and 3 Soviet references.

Card 2/2

Kayalov, G.M.

94-1-15/24

AUTHOR: Kayalov, G.M., Candidate of Technical Sciences

TITLE: On a Scale of Standard Voltages for Industrial Distribution
          Systems and Electrical Equipment (O shkale standartnykh
          napryazheniy dlya promyshlennykh elektrosetey i priyemnikov)

PERIODICAL: Promyshlennaya Energetika, 1958,   No.1,
                                       pp. 31 - 33 (USSR)

ABSTRACT: This is a discussion of an article by Yu.L. Mukoseyev -
          "Promyshlennost' trebuyet napryazheniya 660/380 V" - Promy-
          shlennaya Energetika, 1956, No.8. The desirability of a stan-
          dard distribution voltage of 15 kV was discussed in 1947 by
          G.V. Serbinovskiy and Yu.N. Baskakov (Elektrichestvo, 1947,
          No.1). The author then argues the merits and demerits of 35 kV
          as an industrial distribution voltage and considers that it is
          too high except for a few special cases where very large loadings
          are involved. However, the next standard voltage, 10 kV, is
          often inconveniently low. More attention should be paid to the
          possibility of using 15 kV for industrial distribution. The
          value of 660 V recommended for supply to large equipment (above
          100 kW) is not a good one. It would be better to use the
          standard voltages of 3 or 6 kV. A number of other remarks are
          made about the selection of voltage for industrial distribution.
          There is an editorial note than an expert commission of the
   Card1/2

94-1-15/24

On a Scale of Standard Voltages for Industrial Distribution Systems
and Electrical Equipment

      Committee of Standards, Weights and Measuring Instruments
      examined the draft standard "Rated Voltages for Electric Power
      Systems and Connected Equipment" and recommended the inclusion
      of a voltage of 21 kV for generators (instead of 15 kV) in
      order to be able to supply directly a number of large urban
      and industrial loads without transformers. It was also
      recommended to include the voltage of 660 V to meet the needs
      of the mining industry.

ASSOCIATION: Novocherkassk Polytechnical Institute (Novocherkasskiy
            politekhnicheskiy institut)

AVAILABLE: Library of Congress

Card 2/2

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dots.

Load of electric networks used for mass and automatized production.
Izv. vys. ucheb. zav.; elektromekh. 1 no.6:108-114 '58.
(MIRA 11:9)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novo-
cherkasskogo politekhnicheskogo instituta.
(Electric networks)

SOV/112-59-5-8888

8(3)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1959, Nr 5,
   pp 66-67 (USSR)

AUTHOR: Kayalov, G. M.

TITLE: Using the Probability Theory in the Analysis of Industrial Loads

PERIODICAL: Izv. vyssh. uchebn. zavedeniy. Elektromekhanika, 1958, Nr 1,
   pp 114-123

ABSTRACT: Direct calculation of load is necessary for fairly large receivers;
   however, it is unsuitable in evaluating a mass of receivers. For the latter
   case, using the probability theory and mathematical statistics is expedient at
   all stages of load-calculation procedure: (1) investigating existing relation-
   ships; (2) developing design formulae; (3) deriving the numerical data that
   would determine the design load from experimental data. The contradiction
   between the complicated initial physical relationships and the required
   simplicity of mass calculations necessitates a certain compromise in the final

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Using the Probability Theory in the Analysis of Industrial Loads

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correlation function $B(\tau) = \lim\limits_{T \to \infty} \dfrac{1}{T} \int_0^T P(t)P(t + \tau)dt$.   The latter provides a numerical evaluation of the correlation between the load curve values shifted in time by any stretch $\tau =$ const. It is essential that $B_0 = P_e^2$, $B(\infty) = P_{sr}^2$, where P_e and P_{sr} are the effective and average values of the load. The expressions $B(\tau)$ for the simplest single-receiver curves and for the total load curve are given. Sample curves for which $P \Theta_{max}$ varies on a nonmonotonic pattern with the increase of Θ are presented; however, the dispersion of the random value P_Θ decreases always monotonically. Bibliography: 8 items.

G.M.K.

Card 3/3

KAYALOV, Georgiy Mikhaylovich, kand. tekhn. nauk, dots.

Calculated value of load variations in industrial electric networks.
Izv. vys. ucheb. zav.; elektromekh. 1 no.3:123-129 '58.(MIRA 11:6)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocher-
kasskogo politekhnicheskogo instituta.
(Electric networks)

A.H.7 H ~ i, c-/t.

AUTHOR: Kayalov, G.M.   90-58-4-3/6

TITLE: Economic Solutions to the Supplying of Industrial Plants
              With Electric Power (Ob ekonomicheskikh resheniyakh v elek-
              trosnabzhenii promyshlennykh predpriyatiy)

PERIODICAL: Energeticheskiy Byulleten', 1958, Nr 4, pp 21-28 (USSR)

ABSTRACT: Calculations of the costs of supplying   industrial plants
              with electricity are mostly based on operation costs, amor-
              tization, etc. In the article the different factors de-
              termining such calculations are discussed. An important
              economic factor is the initial capital investment of any
              electric current supply system. The problem of correlat-
              ing the initial and current expenditures is not yet com-
              pletely solved. The opening of new coal mines belongs also
              to the initial capital investment. The specific initial
              investment regarding electric power stations alone amounts
              to 1,200 - 3,000 rubels per kw. The investment regarding
              the opening of coal mines is approximately 490 rubels per
              kw. The amortization deductions are a part of the current
              expenditures and give no return. It is important to know,
              if the initial capital investment should be kept low al-
Card 1/3   though the current expenditures are later increased by this

90-58-4-3/6

Economic Solutions to the Supplying of Industrial Plants With Electric
Power

method; or if the initial investment should be high so that
the current expenditures may be kept low. These consider-
ations are influenced by the amortization term which must
be determined separately in every case. In the Soviet
Union, an important role is played by the factor of so-
cialist accumulation; for the calculation of this formulas
are given. It is admitted that there are often differ-
ences between the actual costs of the final product, raw
materials, etc., and the costs determined by the price lists.
If the reliability and the steadiness of operation of
different systems is the same, it remains to be considered
in which system the energy losses and the need of non-
ferrous metals is lowest. It is expedient to choose a
solution which involves a somewhat increased current ex-
penditure, to save a greater quantity of nonferrous metals.
In comparison to municipal power lines, the industrial
lines have a load limit which is easily reached; they are
not very long and auxiliary lines may be laid without much
expenditure when needed; the loss of voltage is low. The
increase of the cross section of these lines beyond minimum

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Economic Solutions to the Supplying of Industrial Plants With Electric
Power

requirements is admissible only if there are concrete eco-
nomic reasons for it. The distribution of a certain quan-
tity of nonferrous metals between several power lines
should be made according to their economic cross sections
without regard to their length.
There are 14 Soviet references.

AVAILABLE: Library of Congress

Card 3/3   1. Electrical systems-Economic aspects

KAYALOV, Georiy Mikhaylovich, dotsent, kand.tekhn.nauk

Determining the effective number of receivers in calculations of industrial electric networks. Izv.vys.ucheb.zav.; elektro-mekh. 3 no.1:120-125 '60.   (MIRA 13:5)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo instituta.
        (Electric networks)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Rational scientific methods based on three present-day techniques
for the approximate integration of equations in the theory of
automatic control. Izv. vys. ucheb. zav.; elektromekh. 3 no.3:
140-143 '60.   (MIRA 13:10)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocher-
kasskogo politekhnicheskogo instituta.
      (Automatic control)   (Calculus, Operational)

AVILOV-KARNAUKHOV, Boris Nikolayevich, doktor tekhn.nauk, prof.; KAYALOV,
Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent; BRUSENTSOV,
Leonig Vasil'yevich, assistent; SHALYGIN, Igor'Vladimirovich,
assistent

Devices for studying the long-term processes. Izv. vys. ucheb.
zav.; elektromkh. 3 no.7:92-98 '60.   (MIRA 13:9)

1. Zaveduyushchiy kafedroy elektrifikatsii promyshlennykh
predpriyatiy Novocherkasskogo politekhnicheskogo institut (for
Avilov-Karnaukhov). 2. Novocherkasskiy politekhnicheskiy institut
(for Kayalov). 3. Kafedra elektrifikatsii promshlennykh predpri-
yatiy Novocherkasskogo politekhnicheskogo institut (for Brusentsov).
4. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novo-
cherkasskogo politekhnicheskogo institut (for Shalygin).
                    (Recording instruments)

S/144/60/000/05/012/014
E194/E255

AUTHORS: Kayalov, G. M., Candidate of Technical Sciences, and
             Brusentsov, L. V

TITLE: Correlation Functions of Load Curves of the Electrical
             Drives of Machine Tools and Their Practical Significance

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy,
             Elektromekhanika, 1960, Nr 5, pp 123-129 (USSR)

ABSTRACT: The meaning of the term "correlation function" is first
defined; it is a limit of the form given by expression
(1). Correlation functions are becoming widely used
for a variety of purposes, including analysis and
calculation of the loads on industrial electrical
systems. The correlation function gives the variation
of possible mean values of load over a given time interval.
Thus if the correlation function of the load curve is
known, the statistical three sigma rule may be used to
calculate maximum loads of any duration, such as half
an hour or fifteen minutes. Moreover, knowledge of
the correlation function of load curves of individual
current-consuming devices is very useful for assessing
whether the manufacturing process is sufficiently

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Correlation Functions of· Load Curves of the Electrical Drives of
Machine Tools and Their Practical Significance

rhythmic and organised。 The present article considers
both these applications of the correlation function。
Hitherto, the correlation functions of load curves of
industrial electric power systems have not been
studied experimentally: the authors describe such a
study carried out in the machine shops of an Electric
Locomotive Works and of a Tractor Works. The measure-
ments in the shops were carried out by a student
A。 Derevyanchenko and Engineer S。 Pronin。 Determination
of each individual point on the curve of the correlation
function requires laborious integration and the work was
greatly facilitated by the use of two special semi-
automatic measuring instruments designed by one of the
present authors. These instruments, a recorder and an
analyser, were described in Izvestiya vysshikh uchebnykh
zavedeniy, Elektromekhanika, Nr 8, 1958。 The recorder
was used to determine the load curves in the form of
special photographs and the analyser was used as a
correlator to make automatic calculations of the right-
Card 2/6 hand side of formula (1). In practice, the infinite

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limits of integration given in formula (1) must be
replaced by finite limits. Figs 1a and 3a give typical
examples of correlation function curves for the indi-
vidual load curves of machine tools determined in this
way. If the machine is running rhythmically, that is,
if the load curve is strictly periodic, the correlation
function is also periodic. In practice, this applies
only to automatic machines: in other cases the duration
of the operating cycle varies in a random manner from
one cycle to the next. Therefore, the correlation
function of the individual load curve is no longer
periodic but ranges between the rms and the mean ordinates
of the load curve during the shift. Figs 1b and 3b give
curves of the distribution of the duration of an individual
cycle obtained directly from the load curves of individual
machines. The actual load curves are not given because
their shape during a single cycle of the machine tool
does not influence the damping time of the correlation
Card 3/6   function curve. It will be seen that the graph of Fig 1a,

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which corresponds to a relatively small dispersion in
the value of the cycle time (see Fig 1b) has the most
nearly periodic correlation function. A summated effect
arises from the super-position on a strictly periodic
but weak signal of stronger irregular interference. If
graphs of the correlation functions are constructed, they
can be used to reveal the presence of the signal and to
determine its periodicity from the periodicity of the
damped wave of the correlation function. This principle
may be used to detect machine stoppages in the common
case when the dispersion is relatively great and the
stops are relatively small. Under such conditions, it
is difficult to establish the presence and duration of
stops directly from the load curve and the indirect
method is to be preferred. First the mean value of the
duration of the cycle is determined. It corresponds to
the required normal law on a load curve without stoppages,
and suffices to determine the period of damped waves on
the correlation function graph. Then, on the experimental
distribution curve, experimental values of the cycle time

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Correlation Functions of Load Curves of the Electrical Drives of
Machine Tools and Their Practical Significance

are laid off from the origin to determine the mean value
of the standing time. It has been found that variations
in the cycle time depend almost entirely on variations in
the stopping time, whilst the time which the machines are
in operation is usually constant. This has been observed
in many workshops and it also applies to the load curves
of underground sub-stations in coal mines. Fig 4 shows
the correlation function of a feeder load curve which is
aperiodic, whilst that in Fig 5 contains a damped
periodic oscillation associated with the presence in the
load of one large item of current-consuming apparatus.
In general, the presence of damped waves in the graph of
the correlation function of the total load of a group
of power-consuming equipment has no important influence
on the dispersion of the mean loads over particular
intervals of time. If there are waves in the graph the
envelopes of the maxima and minima may have different
time-constants, as may be seen in the graphs of Figs 3a
and 5. Attempts by the authors to obtain a simple
graphical experimental relationship between the time

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Correlation Functions of Load Curves of the Electrical Drives of
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constant of damping of the correlation relationships
and other constants was unsuccessful; but in no case did
the ratio of this time constant to the cycle time
exceed 4, so that expression (5) was generally valid.
The method of using the data obtained in the present
article to calculate the loading of industrial electric
power systems falls outside the scope of the present
article. There are 5 figures and 6 Soviet references.

ASSOCIATION: Novocherkasskiy politekhnicheskiy institut
(Novocherkassk Polytechnical Institute)

SUBMITTED: January 28, 1960

Card 6/6

KAYALOV, G.M.

Principles of constructing the electric networks of industrial
enterprises in the U.S.S.R. !Izv. vys. ucheb. zav.; elektromekh.
4 no. 1:100-112 '61.   (MIRA 14:4)
            (Electric power distribution)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Rated load of the feeder of an electric network and a method
for calculating it for a given graph. Izv. vys. ucheb. zav.;
olektromekh. 4 no.4:114-131 '61.   (MIRA 14:7)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.
            (Electric power distribution)

KAYALOV, Georgiy Mikhaylovich, kand.gekhn.nauk, dotsent

Theory of random processes and calculation of the loads of industrial electric networks. Izv. vys. ucheb. zav.; elektromekh. 4 no.12: 13-21 '61. (MIRA 15:1)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy Novocher-kasskogo politekhnicheskogo instituta.
                    (Electric power distribution)

KAYALOV, GEORGIY MIKHAYLOVICH, kand.tekhn.nauk, dotsent

Theory of random processes and calculation of the loads of
electrical networks of factories. Izv. vys. ucheb. zav.;
elektromekh. 4 no.11:65-81 '61.   (MIRA 14:12)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.
                    (Electric networks)
                    (Electric power distribution)

KIZEVETTER, Ye.N.; KLEYN, P.N.; KHARCHEV, M.K.[deceased];
VOLOBRINSKIY, S.D.; GRODSKIY, S.Ye.; YERMILOV, A.A.;
KAYALOV, G.M.; LIVSHITS, D.S.; MAKSIMOV, A.A.; MESHEL',
B.S.; MUKOSEYEV, Yu.L.; OGORODNOV, S.I.; ROZENBERG, V.A.;
SHRAYBER, L.G.; ZALESSKIY, Yu.Ye., retsenzent; IOKHVIDOV,
E.S., retsenzent; FEDOROV, A.A., retsenzent; SAVEL'YEV,
V.I., red.; LARIONOV, G.Ye., tekhn. red.

[Temporary instructions for determining the electrical loads
of industrial enterprises] Vremennye rukovodiashchie ukaza-
niia po opredeleniiu elektricheskikh nagruzok promyshlennykh
predpriiatii. Moskva, Gosenergoizdat, 1962. 45 p.
                                        (MIRA 16:2)
1. Russia (1923- U.S.S.R.) Glavnoye energeticheskoye uprav-
leniye. 2. Leningradskoye otdeleniye Gosudarstvennogo pro-
yektnogo instituta tyazheloy promyshlennosti (for Kizevetter,
Kleyn, Kharchev). 3. Komissiya po elektricheskim nagruzkam
Nauchno-tekhnicheskogo obshchestva energeticheskoy promyshlen-
nosti (for Volobrinskiy, Grodskiy, Yermilov, Kayalov, Livshits,
Maksimov, Meshel, Mukoseyev, Ogorodnov, Rozenberg, Shrayber).
                (Electric power distribution)

KAYALOV, G.M., kand. tekhn. nauk

Calculation of electrical loads of industrial enterprises.
Prom. energ. 18 no.12:38-39 D '63.   (MIRA 17:1)

VOLOBRINSKIY, Sergey Davidovich; KAYALOV, Georgiy Mikhaylovich;
KLEYN, Petr Nikolayevich; MESHEL', Boris Solomonovich;
SYROMYATNIKOV, I.A., prof., retsenzent; KNYAZEVSKIY, B.A.,
dots., retsenzent; GRODSKIY, S.Ye., red.

[Electrical loads of industrial enterprises] Elektricheskie
nagruzki promyshlennykh pred ·iiatii. [By] S.D.Volobrinskii
i dr. Moskva, Izd-vo "Energiia," 1964. 303 p.
                                        (MIRA 17:8)

KAYALOV, Georgiy Mikhaylovich, kand.tekhn.nauk, dotsent

Principle of the maximum mean load in the calculation of
electrical networks. Izv.vys.ucheb.zav.; elektromekh. 7 no. 3:
367-374 '64.   (MIRA 17:5)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy
Novocherkasskogo politekhnicheskogo instituta.

AVILOV-KARNAUKHOV, B,N.; BOGUSH, A.G.; BOLYAYEV, I.P.; GIHIS, A.F.; DROZDOV,
    A.D.; KAYALOV, G.M.; MIRONOV, Ye.P.; MIKHAYLOV, D.I.; SEKRETEV, D.I.;
    SINEL'NIKOV, Ye.M.; CHERNYAVSKIY, F.I.

    An outstanding scientist; on professor A.G.Beliavskii's 80th
    birthday. Izv.vys.ucheb.zav.; elektromekh. 7 no.11:1399-1400
    '64.   (MIRA 18:3)

OGORODNOV, S.I., inzh.; KAYALOV, G.M., doktor tekhn. nauk; GRODSKIY, S.Ye., inzh.;
VOLOBRINSKIY, S.D., kand. tekhn. nauk

Methods for calculating the electrical loads of industrial enterprises.
Prom. energ. 20 no.5:33-42 My '65.   (MIRA 18:7)

1. Gor'kovskiy avtomobil'nyy zavod (for Ogorodnov). 2. Novocherkasskiy
politekhnicheskiy institut (for Kayalov). 3. Gosudarstvennyy institut
po proyektirovaniyu traktornoy promyshlennosti i sel'skokhozyaystvennogo
mashinostroyeniya (for Grodskiy).

KAYALOV, Georgiy Mikhaylovich, doktor tekhn. nauk, prof.; KURENNYY,
Eduard Grigor'yevich, aspirant

Experimental determination of the statistical indexes of electric
load graphs. Izv. vys. ucheb. zav.; elektromekh. 8 no.1:95-101 '65.
(MIRA 18:3)

1. Kafedra elektrifikatsii promyshlennykh predpriyatiy.

VOLOBRINSKIY, S.D.; KAYALOV, G.M.; KLEYN, P.N.

Reply to D.S.Livshits's remarks on the discussion of the methodology
for determining the loads of industrial electrical distribution
networks of plants. Elektrichestvo no.5:88-89 My '65.

(MIRA 18:6)

KAYALOV, Georgiy Mikhaylovich, doktor tekhn.nauk; KURENNYY, Eduard Grigor'yevich, aspirant

Use of the queueing theory in calculating peak loads of industrial electric power distribution networks. Izv.vys.ucheb.zav.; elektromekh. 8 no.7:803-815 '65.   (MIRA 18:8)

1. Rostovskiy institut inzhenerov zheleznodorozhnogo transporta (for Kayalov). 2. Kafedra elektrooborudovaniya promyshlennykh predpriyatiy Novocherkasskogo politekhnicheskogo instituta (for Kurennyy).

KAYALOV. O.M., doktor tekhn.nauk, prof.

Bibliography. Elektrichestvo no.10:93-94 O '65.

(MIRA 18:10)

AVILOV-KARNAUKHOV, B.N.; BATURO, V.I.; BAKHVALOV, Yu.A.; BOGUSH, A.G.;
    BOLYAYEV, I.P.; GIKIS, A.F.; DROZDOV, A.D.; KAYALOV, G.M.; KLEYMENOV,
    V.V.; KOLESNIKOV, E.V.; MALOV, D.I.

Professor Efim Markovich Sinel'nikov, 1905- ; on his 60th birthday.
Elektrichestvo no.9:89 S '65.

(MIRA 18:10)

L 22425-66   EWT(d)/EWP(k)/EWP(l)

ACC NR: AP6013623   SOURCE CODE: UR/0105/65/000/009/0089/0090

AUTHOR: Avilov-Karnaukhov, B. N.; Baturo, V. I.; Bakhvalov, Yu. A.; Bogush, A. G.;
Bolyayev, I. P.; Gikis, A. F.; Drozdov, A. D.; Kayalov, G. M.; Kleymenov, V. V.;
Kolesnikov, E. V.; Malov, D. I.

ORG: none

TITLE: Honoring the 60th birthday of Professor Yefim Markovich Sinel'nikov

SOURCE: Elektrichestvo, no. 9, 1965, 89-90

TOPIC TAGS: academic personnel, electric engineering personnel, computer research

ABSTRACT: Professor Sinel'nikov was born 11 May 1905 in Yekater-
inoslav (now Dnepropetrovsk) in the family of a clerk. Following
his graduation from the Khar'kov Electrical Engineering Institute
in 1930 he was appointed chief of the Technical Division on Elec-
tric Drive at the Khar'kov Electrical Machinery Plant. Subse-
quently he was appointed research engineer at the Vol'ta Plant
and later on transferred to Moscow, to the Institute of Experi-
mental Medicine, while at the same time he continued his studies.
In 1946 he started working as a senior scientific researcher at
the All-Union Electrical Engineering Institute. Since September
1953 Professor Sinel'nikov has been working at the Novocherkassk
Polytechnic Institute. At present he is head of the Chair of

Card 1/2   UDC: 621.313

L 22425-66

ACC NR: AP6013623

Electrical Machinery, Apparatus, and Computers and Mathematical Devices. He has been instrumental in establishing the computer laboratory at this institute, where research is being performed on the problems of utilizing computer engineering in the design and calculation of electromagnetic, mechanical, and thermal pro- cesses in electrical machinery and equipment. Since 1958 Professor Sinel'nikov has been Coordinating Editor of the journal Elektro- mechanika (Electromechanics) - one of the series published under the aegis of Izvestiya Vysshikh Uchebnykh Zavedeniy (News of High- er Schools). Yefim Markovich is moreover a prominent educator and the holder of many social honors and consultant to a series of industrial enterprises. For his great merits as an educator and for his scientific contributions he has been awarded the Order of Labor Red Banner. Orig. art. has: 1 figure. [JPRS]

SUB CODE: 09 / SUBM DATE: none

Card 2/2

KAYALOVA, S.S.

Chem 4

(3)

Journal of the American Ceramic
Society
Vol. 37 No. 4
Apr. 1, 1954
Glass

Surface tension of silicate melts. A. A. APPEN, K. A. SHISHOV, AND S. S. KAYALOVA. Zhur. Fis. Khim., 26, [3] [31-38 (1952); translated in Silikattech., 4 [3] 104-105 (1953).—The surface tension of 150 silicate melts of the types $xMe_2O \cdot yMeO \cdot zSiO_2$ and $xMe_2O \cdot yMeO \cdot kMe_mO_x \cdot zSiO_2$, containing at least 50 mole % SiO_2, was tested by the drop weight method of Harkins and Brown, and the results are given in a table. The surface tension decreases in the order $Li^+ \to Na^+ \to K^+$, i.e., with increasing radius of the cation; for bivalent metals the order is $Mg^{2+} \to Ca^{2+} \to Sr^{2+} \to Ba^{2+}$ and $Zn^{2+} \to Cd^{2+}$. For cations of the Fe group the surface tension decreases with decreasing cation radius, $Fe^{2+} \to Co^{2+} \to Ni^{2+}$. The surface tension of a Pb glass of 33.8 SiO_2, 62 PbO, and 4.2% K_2O can be reduced by the addition of WO_3 and MoO_3 and less so by CrO_3 and V_2O_5.———M.HA.

5-21-54   Ant

Kaba Iila 55

AUTHORS: Tokareva, I. V., Bergman, A. G.,   SOV/78-3-9-31/48
             Kayalova, S. S.

TITLE: Reciprocal System of Nitrates and Chlorides of Sodium and
             Calcium (Vzaimnaya sistema iz nitratov i khloridov natriya
             i kal'tsiya)

PERIODICAL: Zhurnal neorganicheskoy khimii, 1958, Vol. 3, Nr 8,
             pp. 1909-1913 (USSR)

ABSTRACT: Details were given of the experimental examinations of the
             reciprocal system of nitrates and chlorides of sodium and
             calcium in the presence of solvents. These examinations were
             performed by means of visual-polythermal methods. The system
             Na, Ca $\|$ Cl, NO_3 is comparatively simple and the components
             forming the system do not react with each other by forming
             complex compounds and solid solutions. This system is ana-
             logous to the systems: Na, Sr $\|$ Cl, NO_3 and Na, Ba $\|$ Cl, NO_3.
             The results demonstrate that the reciprocal system
             Na, Ca $\|$ Cl, NO_3 belongs to the most simple reciprocal systems.
             There are 9 figures, 3 tables, and 10 references, 10 of which
Card 1/2

Reciprocal System of Nitrates and Chlorides of   SOV/78-3-8-31/48
Sodium and Calcium

       are Soviet.

ASSOCIATION: Rostovskiy-na-Donu gosudarstvennyy universitet i Luganskiy
           gosudarstvennyy pedagogicheskiy institut (State University
           Rostov na Donu and the State Pedagogical Institute, Lugansk)

SUBMITTED: July 21, 1957

Card 2/2

| 1800

24011
S/080/61/034/006/014/020
D247/D305

AUTHOR: Kayalova, S. S.

TITLE: The coating of molybdenum with various silicate fusions

PERIODICAL: Zhrunal prikladnoy khimii, v. 34, no. 6, 1961,
1357 – 1359

TEXT: In recent work on the protection of metals from oxidation
the protection of molybdenum has proved most difficult since at
520° molybdenum trioxide is formed which sublimates, thus destroy-
ing the metal. Substances containing vitriform bands seemed promis-
ing and the aim was to study silicate fusions which would coat the
metal successfully. The coating was measured by the resting drop
method. An apparatus was made to allow determination of coating in
various gaseous media up to 1150°. It consisted of a horizontal
vacuum stove with a platinum-rhodium heater. The specimen of metal
whose surface irregularities varied from 5-7 μ, was placed in the
stove with pieces of the glass under investigation. There was a

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24011

S/080/61/034/006/014/020

D247/D305

The coating of molybdenum ...

vacuum in the stove initially and then an inert gas was introduced. The temperature was raised and the change in shape of the drop observed, the degree of coating being determined either by the contact angle of the drop or the area of fusion spread. For substances giving a good coating the second method was used. The specimen of glass was of uniform volume for comparative purposes. Initial studies were done with silicate fusions with a large content of lead monoxide, due to their low viscosity and surface tension. Results were poor and the addition of various oxides and surface-acting components had little effect. Further work was done on lead-less fusions. Study of the influence of cations of groups 1-11 showed that coating improves with decline in the radius of the cation, i.e. $K \longrightarrow Na \longrightarrow Li \longrightarrow Ba \longrightarrow Be$. The most interesting results were given by substances containing TiO_3 and B_2O_3 together which form a thin film on the surface of the molybdenum. Substances without these components gave poorer results, though better than with lead. There are 3 figures, 1 table and 10 references: 7 Soviet-bloc

Card 2/3

24011
S/080/61/034/006/014/020
The coating of molybdenum ...   D247/D305

and 3 non-Soviet-bloc. The references to English-language publica-
tions read as follows: B. Ellefson, and N. Taylor, J. Am. Cer. Soc.
21, 6, 205, 1938; Michael Humenik, J.K., and William D. Kingery,
J. Am. Cer. Soc., 37, 1, 18, 1954.

SUBMITTED: August 30, 1960

Card 3/3

APPEN, A. A. and KAYALOVA, S. S.

"Classification of Oxides According to Their Influence on the Surface Tension of Silicate Melts"

report presented at the Sixth International Congress on Glass, 8-14 Jul 62, Wash., D.C.

Institute for Silicate Chemistry, Leningrad

S/020/62/145/003/009/013
B101/B144

AUTHORS: Appen, A. A., and Kayalova, S. S.

TITLE: Surface tension of alkali silicate melts

PERIODICAL: Akademiya nauk SSSR. Doklady, v. 145, no. 3, 1962, 592-594

TEXT: The surface tension σ of Li_2O-SiO_2, Na_2O-SiO_2, and K_2O-SiO_2 melts with an Me_2O content of 16-45 mole% was measured by drop weight determination (A. A. Appen, Optiko-mekhanicheskaya promyshlennost', no. 3, 7 (1936)), and the effect of the admixture of a second alkali oxide was studied. This method is suited to determine the σ of melts with a viscosity below 3000 poise. Its results are in good agreement with those of other methods (C. W. Parmelee, K. C. Lyon, C. G. Harman, Univ. Illinois Bull., 36, 81, June 6 (1939); L. Shartsis, S. Spinner, J. Res. Nat. Bur. Stand., 46, no.5, 385 (1951)). Results obtained for Rb_2O-SiO_2 at 1300°C (first figure being mole% Rb_2O, second figure being σ, erg/cm^2, third figure being $\Delta\sigma/\Delta t$, erg/cm^2. °C): 17, 200.1, -0.03; 24, 188.0, -0.045; 40, 146.3, -0.087; and Card 1/2

KAYALOVA, Ye. Ya.

Kayalova, Ye. Ya. - "Complications in births due to narrow pelvis," (Material based on the ten-year period, 1936 - 1945 from the maternity hospital im prof. Snegireva), Collection dedicated to the Maternity Hospital im. Snegireva on its 175th anniversary, Leningrad, 1949, p. 137-44

SO: U-4355, 14 August 53, (Letopis 'Zhurnal 'nykh Statey, No. 15, 1949)

2-58-5-12/17

AUTHOR: Kayan, P., Chief of the Oblast' Statistical Administration

TITLE: To Devote More Attention to Initial Registration at Kolkhozes
             (Usilit' vnimaniye pervichnomu uchëtu v kolkhozakh)

PERIODICAL: Vestnik Statistiki, 1958, Nr 5, pp 77 - 78 (USSR)

ABSTRACT: In a report, workers of the Statistical Administration of the
             Vinnitskaya Oblast' pointed to various deficiencies in the ini-
             tial registration of kolkhoz production and recommended measures
             for improvement. As a result, district organizations took various
             measures, such as increasing the book-keeping staff, attaching
             expert accountants to kolkhozes and convening instructive con-
             ferences. Two such conferences were subsequently held, where
             severe criticisms were expressed towards kolkhoz chiefs who
             did not maintain established registration orders.

ASSOCIATION: Statisticheskoye upravleniye Vinnitskoy Oblasti (Statistical
             Administration of the Vinnitskaya Oblast')
AVAILABLE: Library of Congress
Card 1/1

KAYAN, P.L., golovnyy red.; KRASNER, Ya., tekhn.red.

[Principal indexes of the development of the economy of Vinnitsa Province; a statistical manual] Osnovni pokaznyky rozvytku narodnoho khozpodarstva Vinnyts'koi oblasti; statystychnyi zbirnyk. Vinnytsia, 1957. 278 p.

(MIRA 11:6)

1. Vinnytskaya oblast'. Statisticheskoye upravleniye. 2. Nachal'nik Statistichnogo upravlinnya Vinnits'koi oblasti (for Kayan)
        (Vinnitsa Province—Statistics)

NAVAKATIKYAN, A.O.; KAYAN-YASNYY, V.V.; IOSEL'SON, S.A.; PEVNYY, S.A.

Some data on the effect of the working day on cardiovascular and
neural functions in miners. Fiziol.zhur. (Ukr.) 1 no.4:54-63
Jl-Ag '55.   (MLRA 9:11)
        (WORK, effects,
            on ECG & nervous system in miners)
        (ELECTROCARDIOGRAPHY,
            eff. of work in miners)
        (NERVOUS SYSTEM, physiology,
            eff. of work in miners)
        (MINING,
            eff. of work on ECG & nervous system in miners)

KAYANDER, M.S.

105-58-5-24/25

Dissertations
ABSTRACT: For the Degree of Candidate of Technical Sciences.
             At the All-Union Scientific Research Institute for Metrology
             imeni Mendeleyev (Vsesoyuznyy nauchno-issledovatel'skiy institut
             metrologii im. Mendeleyeva)
             M.S.Kayander on June 9, 1950 "Studying the Conditions for the In-
             crease of the Accuracy of Electrodynamic Equipments at Higher
             Frequencies". Official opponents: A.D.Kratirov, Professor, Doctor
             of Technical Sciences and I.G.Rusakov, Docent, Candidate of Tech-
             nical Sciences.
             A.D.Sokolov on May 7, 1954 "Experience Gathered with Respect to
             the Control of the Electromagnetic Properties of Dynamo- and
             Transformer Steel". Official opponents: N.N.Razumovskiy, Professor,
             Doctor of Technical Sciences and N.G.Chernysheva, Candidate of
             Technical Sciences.
             At the Leningrad Institute of Mining imeni Plekhanov (Leningradskiy
             gornyy institut im. Plekhanova)
             V.S.Belovidov on June 30, 1953 "On the Selection of an Electric
             Drive for Pit Ventilators". Official opponents: F.N.Shklyarskiy,
             Professor and A.V.Rys'yev, Docent, Candidate of Technical Sciences.
             At the Leningrad Institute for Railroad Engineers imeni Obraztsov
Card 2/4   (Leningradskiy institut inzhenerov zheleznodorozhnogo transporta
             im. Obraztsova):

PERIODICAL: Elektrichestvo, 1958, Nr 5, pp. 91-91 (USSR)

KAYANDER, M.S.

Errors in ammeters and voltmeters used in electromagnetic and
electrodynamic systems operated at higher frequencies. Trudy
VNIIM no.24:8-23 '54.   (MIRA 10:12)
                    (Ammeter)   (Voltmeter)

Translation from: Referativnyy zhurnal. Elektrotekhnika, 1957, Nr 5, p 232 (USSR)

AUTHOR: Kayander, M. S.

TITLE: Reference Instrument Current Transformer for 50-10,000 cps
(Obraztsovyy izmeritel'nyy transformator toka dlya diapazona chastot
50-10 000 gts)

PERIODICAL: Tr. Vses. n.-i. in-ta metrologii, 1956, Nr 28, pp 36-49

ABSTRACT: This transformer has been constructed for checking instrument
transformers and ammeters used at audio frequencies. All necessary
measures for reducing errors have been taken in the transformer design.
Calculations and corroborating experiments have shown that within the
50-10,000-cps frequency band and with load resistance of 0.4 ohms or lower,
errors do not exceed those permissible for the 0.2 class and are independent
of the scheme of connections of primary windings. On the basis of the calcula-
tions and experiments, a conclusion is drawn that the above current transformer
can be used as a reference transformer for the above frequency band.

R.S.M.

Card 1/1

AUTHORS: Gordov, A.N., Brodskiy, A.M., Kayander, M.S., Skragan, A.L.

TITLE: New Apparatus   for Checking Thermo-Technical Devices
(Novyye ustanovki dlya poverki teplotekhnicheskikh priborov)

PERIODICAL: Izmeritel'naya tekhnika, 1958, Nr 6, pp 51-56 (USSR)

ABSTRACT: The All-Union Scientific Research Institute of Metrology
imeni D.I. Mendeleyev has developed special devices for the
checking of thermo-technical devices. The apparatus UTT-1
is used for checking thermocouples and resistance thermome-
ters. The circuit diagram is shown in Figure 1. The
current may be regulated from 4 to 10 ma. The potentio-
meter R2-A, which has been developed for this apparatus on
the base of the potentiometer R2/1, has 3 measuring limits
of 1,500, 150 and 15 mv. The apparatus UVPT-1 is used for
checking automatic electronic potentiometers, millivoltmeters,
devices operating in rheostat and inductive transducers, etc.
The circuit diagram is shown in Figure 2. The apparatus has
four measuring circuits. The checking of devices with the
newly developed apparatus   is simpler and faster due to an

Card 1/2

New Apparatus   for Checking Thermo-Technical Devices   SOV/115-58-6-22/43

efficient arrangement of measuring elements and the use of
the semi-automatic R2-A potentiometer.
There are 4 diagrams.

ASSOCIATION: Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im.
D.I. Mendeleyeva (All-Union Scientific Research Institute of
Metrology imeni D.I. Mendeleyev)

Card 2/2

BEZIKOVICH, A.Ya.; ZORIN, D.I.; KAYANDER, M.S.

Frequency errors in wattmeters. Trudy VNIIM no.38:103-109
'59.   (MIRA 13:4)
(Wattmeter)

FILM I BOOK EXPLOITATION   SOV/4407

Akademiya nauk Ukrainskoy SSR. Institut elektrotekhniki

Voprosy obshchego elektropriborostroyeniya (Overall Problems of the Electric Instrument Industry) Kiyev, 1960. 262 p. 3,000 copies printed.

Additional Sponsoring Agency: Nauchno-tekhnicheskoye obshchestvo priborostroitel'noy promyshlennosti. Ukrainskoye respublikanskoye pravleniye.

Editorial Board: A. D. Nesterenko, Corresponding Member, Academy of Sciences Ukrainskaya SSR (Resp. Ed.), M. I. Levin, Doctor of Technical Sciences, P. P. Ornatskiy, Candidate of Technical Sciences, V. F. Petrochenko, Candidate of Technical Sciences, A. V. Gorodivskiy, Engineer, S. Sh. Zaslavskiy, Engineer, and B. A. Belber; Ed. of Publishing House: B. A. Kazantsev; Tech. Ed.: M. I. Tsitkova.

PURPOSE: This book is intended for technical personnel working in the field of electric measurement techniques, in electrical instrument plants, in laboratories of electric power systems and in electric measurement laboratories of plants.

COVERAGE: This is a collection of reports presented at a conference on the overall development of the Soviet electrical instrument industry held in Kiyev on October 25-27, 1956. The conference was convened by the Institut elektrotekhniki AN USSR (Institute of Electrical Engineering, Academy of Sciences Ukr.SSR) and the Ukrainskoye respublikanskoye pravleniye NTO priborostroitel'noy promyshlennosti (Ukrainian Republic Administration of NTO of the Instrument-making Industry). Problems relating to electrical instrument-making as a whole (reports by A. D. Nesterenko, P. P. Ornatskiy, D. B. Averbukh, Ye. G. Shramkov) were discussed, as well as problems relating to the development of reference instruments (Ye. S. Averbukh, I. Ye. Knorre), the automation of electro-measuring circuits (A. D. Shramov, L. Ya. Mishrol), and to the theory and practice of magnetic measurements (N. M. Shchlts, G. I. Gornbteym). Attending the conference were workers of scientific research institutes and schools of higher education, along with representatives of the main electric instrument plants ("Vibrator" in Leningrad, "Tochelektropribor" in Kiyev, "Elektroizmeritel" in Omsk, ZIP in Krasnodar and others) and of various electric power systems. No permalloys are mentioned. References accompany ten of the reports.

Mil'shtayn, I. I. (Deceased). Frequency Compensation of Electro-Dynamic System Voltmeters   48

Using formulas of frequency error compilation, the author demonstrates that the introduction is a circuit of "compensating" capacitance sharply reduces the error component.

Bezikovich, A. Ya., D. I. Zorin and M. S. Kapatov, Frequency Errors in Voltmeters   55

The authors speak of the instrument-checking apparatus designed by the VNIIM (All-Union Scientific Research Institute of Machinery and Metalworking) laboratory of electrical measurements on the basis of the method of thermoelectric comparison. Errors caused by inductance, mutual inductance and eddy currents, as well as voltmeter frequency response characteristics, and errors of compensated and low power-factor voltmeters are reviewed.

Ogan110, M. A. Frequency Error Compensation in Electrodynamic System Voltmeters   62

In order to establish a method of selecting the optimum parameters of a voltmeter circuit, the author gives a general expression for voltmeter frequency error and examines frequency compensation for two types of voltmeters. There are 2 references, both Soviet.

Levin, M. I., and A. M. Lrumenham. Error Compensation of Voltage Transformers Intended for Operation at Raised Frequencies   81
The authors present the theoretical data on the basis of which the "Etalon" plant manufactured reference voltage transformers for the 100 - 10,000 cycle frequency range with a voltage of 400/100 to 2000/1000 volts.

Rozin'ts, I. L. Magnetic Oxide-Coated Materials   95
The author examines the electromagnetic properties of magnetic oxide materials worked out by the NII NKTP and compares them with the properties of magnetic metals of various groups. Low coercive oxide materials with both high and low permeability, as well as high coercive nonmetallic materials are discussed.

Card 6/12

S/194/61/000/008/007/092
D201/D304

AUTHORS: Bezikovich, A.Ya., Zorin, D.I. and Kayander, M.S.

TITLE: Frequency errors of wattmeters

PERIODICAL: Referativnyy zhurnal. Avtomatika i radioelektronika,
                no. 8, 1961, 10, abstract 8 A65 (V sb. Vopr. obshch.
                elektropriborostr., Kiyev, AN USSR, 1960, 53-61)

TEXT: A method and equipment has been designed at the
VNIIM im. D.I. Mendeleyev for calibrating ammeters, volt and watt-
meters at the frequency range of up to 20,000 c/s. The designed
equipment is based on the thermo-electrical comparison method. The
calibration accuracy of a.c. at frequencies up to 20,000 c/s is
about 0.1 to 0.2%. The instruments produced for mains frequencies
have been tested over a wide range of frequencies and for some types
additional frequency correction have been determined. Formulae are
given of frequency error terms resulting from inductance, mutual
inductance and eddy currents. Calibrating frequency curves are

Card 1/2

Frequency errors of wattmeters

S/194/61/000/008/007/092
D201/D304

given for several types of instruments. Some types of wattmeters, designed for 50 c/s operation, may be used at up to 500 c/s provided that additional errors do not exceed the value expressing the class of accuracy of the instrument. Recommendations are given on the means of decreasing the frequency errors of small power factor wattmeters. /Abstracter's note: Complete translation/

Card 2/2

S/115/61/000/002/005/006
B116/B203

AUTHOR: Kayander, M. S.

TITLE: Differential apparatus for the checking of radiation pyrometers

PERIODICAL: Izmeritel'naya tekhnika, no. 2, 1961, 23-26

TEXT: The УРП-4 (URP-4) apparatus which is mostly used in the USSR for the calibrating and checking of radiation pyrometers involves very tiresome work; only one standard pyrometer, or four working pyrometers, can be checked during one shift. The author presents a differential method for the checking of radiation pyrometers. The pyrometers to be checked are not gauged one by one as in the apparatus mentioned at the beginning, but simultaneously placed on either side of the light source in such a position that the radiant flux striking them is identical. The difference between the thermo-emf of the pyrometer to be checked and that of the standard pyrometer is directly measured. The circuits of the two pyrometers are connected in a differential circuit. Fig.1 shows the basic circuit diagram of the apparatus. From the light source 3, the light flux passes through

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Differential apparatus for...

S/115/61/000/002/005/006
B116/B203

equal condenser lenses K to the object lenses of the two pyrometers. The
two circuits are connected to switch 5; the latter connects them with a
d.c. potentiometer. This method simplifies the checking, and avoids the
influence of voltage instability (of the light source) on the results of
the measurement. A УРД (URD) experimental apparatus was built at the
VNIIM according to a design by the design engineers L. S. Levin and
L. A. Turchaninova; it was adjusted by the mechanicians A. D. Demkin and
L. S. Smirnov. In the center of the apparatus, there is a revolving block
of the radiator. It carries a cinema projection lamp which sends the
radiant flux through two condenser lenses (attached to bows of the block
side-walls) to the object lenses of the two pyrometers. The block can be
turned through exactly 180°. The condenser lenses can be shifted along the
optical axis of the apparatus. Pyrometers of the VNIIM of the ТЕРА-50
(TERA-50) and РП (RP) types were checked by this experimental apparatus.
The calibration curves obtained differed from those on the "black body"
by an average of ±4°C. 65 standard radiation pyrometers were calibrated
on the same apparatus. Deviation from the average was 5°C at most. With
the use of the "Tara" method (Ref.1) the checking capacity increased by
the 10-fold. The principal shortcoming of the URP-4 apparatus (irregularity

Card 2/3

Differential apparatus for...

S/115/61/000/002/005/006
B116/B203

and imperfect blackness) has not been eliminated in the URD apparatus either. Therefore, the telescopes to be checked must be of the same type and mounted under equal conditions. At present, all instruments arriving at the VNIIM are checked on the URD apparatus. There are 2 figures and 1 Soviet-bloc reference.

Legend to Fig.1: 1) Standard pyrometer,
2) condenser lens, 3) light source,
4) pyrometer to be checked, 5) switch,
6) to the potentiometer.
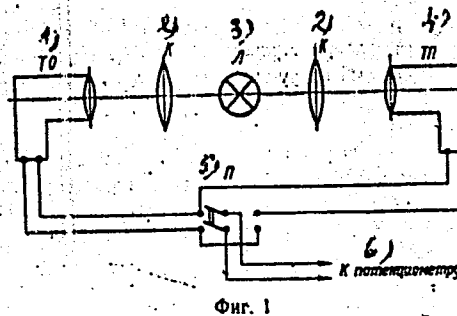
Фиг. 1

Fig. 1

Card 3/3

AUTHORS: Gordov, A. N., Zaborovskaya, Z. U., Kayander, M. S.

TITLE: Apparatus for determining dynamic errors in thermal detectors in temperature measure- ments under varying heat-transfer conditions

PERIODICAL: Referativnyy zhurnal, otdel'nyy vypusk. 32. Izmeritel'naya tekhnika, no. 13, 1962, 53, abs- tract 32.13.390. (Tr. in-tov Kom-ta stabdartov, mer i izmerit. priborov pri Sov. Min. SSSR, no. 51 (111), 1961, 185-197)

TEXT: A description is given of test units for determining the errors in measurement of temperature fluctu- ations of a gas stream by different thermal detectors under varying flow-velocity (and heat-transfer) condi- tions. One of these test units was used to investigate thermal detectors under conditions of monotone variation of flow temperature and velocity. The temperature of a body immersed in the stream was found to vary according to a law basically different from the law of flow-temperature fluctuations. The other unit was used for similar investigations but with fluctuating flow temperature and velocity. A difference was found between the average temperature-fluctuation level of the thermal detector and that of the stream. Experimental methods are described and basic mathematical relationships are given. There are 8 figures and 4 references.

[Abstracter's note: Complete translation.]

Card 1/1

S/589/61/000/051/007/008
I054/I254

AUTHORS: Gordov, A.N., Zaborovskaya, Z.U., Kayander, M.S.

TITLE: Experimental installation for determining dynamic errors during
            temperature measurements at transient heat-flux conditions

SOURCE: USSR. Komitet standartov, mer i izmeritel'nykh priborov. Trudy
            institutov Komiteta. no. 51. (111). 1961. Isledovaniya v oblasti
            temperaturnykh izmereniy. 185-197

TEXT: A special testing installation was built at VNIIM. One rig was
used with continuously changing flow rates and temperatures, and another for a
pulsating flow. The following three main sources of errors are discussed:
1) thermal inertia of the sensing element and mechanical inertia of the
indicating instruments; 2) design of the sensing elements and heat losses through
its connections; 3) faulty measurements of heat transfer coefficients due to
inconsistent readings of the thermoanemometer. The frequency range of the
pulsations was between 0.1 to 1.0 kcps. There are 8 figures.

ASSOCIATION: VNIIM
SUBMITTED: November 11, 1959
Card 1/1

KAYANDER, M. S.

Radiator with a high sighting ratio for calibrating radiation pyrometers. Izm. tekh. no.10:36-37 O '62.

(MIRA 15:10)

(Pyrometers)   (Calibration)

KAYANDER, M.S.

Simulation of the measurement of variable temperatures. Trudy
inst.Kom.stand.mer i izm.prib. no.71:198-207 '63.
(MIRA 17:9)

1. Vsesoyuznyy nauchno-issledovatel'skiy institut metrologii im.
D.I. Mendeleyeva.

KAYANDER, M.S.

Frequency characteristics of an electronic potentiometer. Izm.tekh.
no.2:17-19 F '64.   (MIRA 17:4)

KAYANDER, M.S.

Dynamic errors 'n measuring variable temperatures by a ther-
moelectric measuring set. Nov. nauch.-issl. rab. po metr.
VNIIM no.3:24-2' '64   (MIRA 18:2)

KAYANOVICH, V.A.; KOZHEVNIKOVA, Z.I.; MIROPOL'SKAYA, I.L.; MIKHAYLOVA, N.P.;
FADEYEVA, A.I.; FOMICHEVA, D.N. (Gor'kiy)

Industrial hygiene and the health of women working with benzene.
Gig. truda i prof. zab. 2 no.1:26-31 Ja-F '58.   (MIRA 11:3)

1. Insitut gigiyeny truda i profzaboelvaniy i Meditsinskiy institut.
        (BENZENE--TOXICOLOGY)
        (LACTATION)

KAYANOVICH, V. A.; KAVALEROVA, S. M.; TROITSKIY, S. A. (Gor'kiy)

Problems in industrial hygiene and the state of health of workers
in benzoyl peroxide production. Gig. truda i prof. zab. no.1:
46-49 '62.   (MIRA 15:2)

1. Gor'kovskiy nauchno-issledovatel'skiy institut gigiyeny truda
i profbolezney.

(INDUSTRIAL HYGIENE)   (BENZOYL PEROXIDE—TOXICOLOGY)

KAYASHEV, A.V., insh.

Efficiency of large consolidatd transportation units. Zhel.dor.transp.
44 no.3:72-75 Mr '62.   (MIRA 15:3)
(Railroads,Industrial)

KAYASHEV, A.V., inzh.

Technical and economic efficiency of the routing of shipper's
special destination trains from the loading point. Vest.TSNII
MPS   21   no.8:30-34   '62.   (MIRA 16:1)

1. Institut kompleksnykh transportnykh problem.
                    (Railroads—Making up trains)
                       (Railroads—Freight)

KAYASHEV, T.T.

Attachment to the PS-10 drive for the automatic switching off
of the lubricant release. Transp. i khran. nefti i nefteprod.
no.10:31-32 '64.   (MIRA 17:12)

1. Severo-Zapadnoye nefteprovodnoye upravleniye.

L 46577-66

ACC NR: AR6016246   SOURCE CODE: UR/0058/65/000/011/H016/H016

AUTHORS: Eydukyavichyus, G.; Kayatskas, A.

TITLE: Some problems in the application of "optimal bases" for the construction of self organizing systems

SOURCE: Ref. zh. Fizika, Abs. 11Zh121

REF SOURCE: Tr. uchebn. in-tov svyazi. M-vo svyazi SSSR, vyp. 24, 1965, 33-38

TOPIC TAGS: optimal automatic control, self adaptive control, interference immunity

ABSTRACT: The authors consider questions involved in the analysis of noise with the aid of optimal bases, as applied to a self-organizing communication system. Results are presented of experiments on the determination of the interference immunity of signals of various forms when received by an ideal receiver and based on analysis of the noise. The results of the experiments confirm that the optimal bases can find application in self-organizing communication systems. [Translation of abstract]

SUB CODE: 17, 09/

Card 1/1   hs

AUTHOR: Kayatskas, A. (K.Naumestis)   SOV-107-58-4-26/57

TITLE: A Use for Burnt-out Phanotrons (Ispol'zovaniye peregorev-
               shikh gazotronov)

PERIODICAL: Radio, 1958, Nr 4, p 20 (USSR)

ABSTRACT: A burnt-out phanotron can be used instead of a gas-dis-
               charge stabilitron. The author used a VG-176 phanotron
               for stabilizing 140 v.

               1. Voltage stabilizers--Equipment   2. Phanotrons--Applications

Card 1/1

КАУАⱱА, Ĺ. Ι.

Translation from: Referativnyy zhurnal, Geografiya, 1957, Nr 6,   14-57-6-12646
                   p 126 (USSR)

AUTHOR: Kayava, L. I.

TITLE: A New Type of Nematode (Metastrongylus tschiauricus,
                n. sp.) in Georgian Wild Boar /Novyy vid nematody
                (Metastrongylus tschiauricus, n. sp.) dikoy svin'i iz
                Gruzii/

PERIODICAL: Soobshch. AN GruzSSR, 1956, Vol 17, Nr 6, pp 527-530

ABSTRACT: A new type of nematode (Metastrongylus tschiauricus,
                n. sp.) has been found in the lungs of the wild boar
                (Sus scrofa L.) which lives in the Chiaurskiye lesa
                (forests), Lagodekhi rayon of Georgia. Of the four
                other species of this type of swine parasite, one is
                encountered in Kazakhstan, and three are widely spread
                all over the USSR.

Card 1/1
                                                               I. Ya.

KAYBANOV, Aleksandr Stepanovich; SMAGORINSKIY, B.S., red.; IZHBOLDINA, S.I., tekhn.red.

[Handbook on photography] Fotograficheskii spravochnik. Stalingrad, Stalingradskoe knizhnoe izd-vo, 1961. 127 p.
(MIRA 15:2)

(Photography)

Kaybichev, A.V.

KAYBICHEV, A.V., kand. tekhn. nauk

Angular measurement of the amount of metal in barrel-
type and teapot spout ladles. Lit. proizv. no.11:37-38
N '65.   (MIRA 18:12)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Melting and overheating of cast iron in cupola furnaces.
Trudy Inst. met. UFAN SSSR no.4:101-106 '58.

(MIRA 12:10)

(Cupola furnaces) (Cast iron)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Change in the chemical compostion and heat capacity of cast
iron during its melting in cupolas. Trudy Inst. met. UFAN
SSSR no.4:107-111 '58.   (MIRA 12:10)
          (Cupola furnaces)   (Cast iron)

CHERNOBROVKIN, V.P.; ANAN'IN, A.A.; DOBRYDEN', A.A.; KAYBICHEV, A.V.

Comparative evaluation of foundry irons of the Ural plants. Lit.
proizv. no. 5:8-10 My '61.   (MIRA 14:5)
        (Cast iron) (Ural Mountains—Metallurgical plants)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Lower boundary of the melting zone in cupola furnaces. Lit.
proizv. no.2:17 F '63.   (MIRA 16:3)
                              (Cupola furnaces)

CHERNOBROVKIN, V.P.; ANAN'IN, A.A.; KAYBICHEV, A.V.; DOBRYDEN', A.A.

Gases in foundry iron. Izv.vys.ucheb.zav.; chern.met. 5 no.4:
136-139 '62. (MIRA 15:5)

1. Ural'skiy filial AN SSSR.
(Gases in metals)

KAYBICHEV, A.V.; CHERNOBROVKIN, V.P.

Calculating the overheating of cast iron and position of the
melting zone in cupolas. Izv. vys. ucheb. zav.; chern. met.
5 no.10:137-148 '62.   (MIRA 15:11)

1. Institut metallurgii Ural'skogo filiala AN SSSR.
        (Cupola furnaces)   (Heat--Transmission)

CHERNOBROVKIN, V.P.; KAYBICHEV, A.V.; ANAN'IN, A.A.

Effect of gas removal from cast iron on the structure and form of graphite. Izv. vys. ucheb. zav.; chern. met. 6 no.4: 136-140 '63.   (MIRA 16:5)

1. Ural'skiy filial AN SSSR.
   (Gases in metals)   (Cast iron—Metallography)

75577
SOV/130-59-10-9/20

18.5000

AUTHOR: Kaybicheva, M. N.

TITLE: Magnesia Lining Material With Sintering Additions

PERIODICAL: Metallurg, 1959, Nr 10, pp 17-18 (USSR)

ABSTRACT: In the search for better linings for induction
furnaces a magnesia mass with ferrous and fer-
rotitanium additions was tested in a crucible.
The chemical composition is shown in Table 1.
Based on experimental work the author makes the
following recommendations: (1) metallurgical
powder "Ekstra" as basic material for crucible
lining, (2) magnesite-chrome roofing brick after
use in steel-melting furnaces for melting of
chromium steel, (3) any of the following mixtures
as sintering additions, (a) magnesite - slag -
titanium-magnetite concentrate (2.5:2.5:1), (b)
raw dolomite - scale to produce dicalcium ferrite
and, (c) magnesite and titanium-magnetite con-
centrate (4:1), (4) Grain composition of the charge-

Card 1/4

Magnesia Lining Material With Sintering   SOV/130-59-10-9/20
Additions

- 2 to 4 mm fractions: 45 to 50%, 0.088 to 2 mm: 15%,
and under 0.088 mm: 35 to 40%, (5) light-weight crucible
lid and decreased water supply to inductor after tap-
ping so as to protect lining from drastic tempera-
ture changes. The use of magnesia material with
sintering additions doubles or triples lining life.
of induction furnaces. There is 1 table.

Card 2/4

75577   TABLE 1   SOV/130-5-10-9/20

Capacity of crucible kg	Thickness of crucible walls mm	Charge Composition %	Chemical Composition, %									
			SiO₂	Al₂O₃	TiO₂	Fe₂O₃	FeO	CaO	MgO	Cr₂O₃	MnO	n. n. n.
40	30	Magnesite powder "MPM" (fractions 0 to 4 mm): 40% combined ground magnesite (45%), open-hearth slag (45%), ilmenite (10%): 10%	4,10	3,03	0,56	0,79	0,97	4,63	82,95	—	0,56	—
50	40	"Ekstra" magnesite powder: 90%, combined ground magnesite, electric furnace slag and ilmenite (2.5:2.5:1.0): 10%	4,17	0,52	0,45	4,88	—	4,29	85,85	—	—	0,13
150	50—60	"Ekstra" magnesite powder: 90%, caustic magnesite: 6,6%, ground magnesite and ilmenite mixture (4:1): 10%	2,00	0,07	3,20	2,33	—	3,26	82,52	—	—	3,70
40	30	"Ekstra" magnesite powder: 90%, ground raw dolomite-scale mixture: 10%	3,52	1,46	not determined	2,84	3,19	5,72	83,70	—	—	0,044
300	60—70	Chrome-magnesite: 100%	3,40	6,52	—	9,29	1,22	1,25	62,99	14,20	0,23	—

Card 3/4

Magnesia Lining Material with Sintering Additions   75577
                                                          SOV/130-59-10-9/20

ASSOCIATION: Eastern Institute of Refractories (Vostochnyy institut
              ogneuporov)

Card 4/4

KAYBICHEVA, M. N.; FADEYEVA, N. I.; Prinimali uchastiye: KOSOLAPOV,
Ye. F.; GILEV, Yu. P.; DRESVYANKIN, V. I.; MIKHAYLOV, V. S.

Studying conditions of service and the character of roof
failure in electric steel smelting furnaces. Trudy Vost. inst.
ogneup. no.2:101-117 '60.   (MIRA 16:1)

(Electric furnaces—Maintenance and repair)
(Refractory materials—Testing)

S/131/60/000/04/10/015
B015/B008

AUTHORS: Kaybicheva, M.N., Tulin, N.A., Bastrikov, N.F., Fadeyeva, N.I.

TITLE: Wall-blocks of Electric Steel-melting Furnaces From Scrap of
             Magnesite-chromite Bricks

PERIODICAL: Ogneupory, 1960, No. 4, pp. 186-188

TEXT: Experiments with these wall-blocks which were carried out at the
Chelyabinskiy metallurgicheskiy zavod (Chelyabinsk Metallurgical Plant) are
described in the paper under review. The charge was produced by crushing scrap
of used magnesite-chromite- and chrome-magnesite bricks. The chemical compo-
sition of the experimental charges is given in table 1 and their granulation
in table 2. Various grades of steel were smelted in the furnace with magnesite-
chromite wall-blocks, the temperature of the metal before tapping being
between 1560 and 1640°. It is stated in conclusion that the stability of the
magnesite-chromite wall-blocks rammed from scrap is not inferior to that of
wall-blocks made from magnesite powder. Various other furnace parts can also be
produced from ground scrap of used bricks. The consumption of metallurgical

Card 1/2

Wall-blocks of Electric Steel-melting Furnaces   S/131/60/000/04/10/015
From Scrap of Magnesite-chromite Bricks   B015/B008

magnesite powder may be reduced by using scrap. There are 2 tables.

Card 2/2

KAYBICHEVA, M.N.

Dust formation in electric furnaces in accelerating the metallurgical
process by oxygen. Stal' 20 no.9:809-812 S '69.   (MIRA 13:9)
          (Electric furnaces)   (Oxygen--Industrial applications)

KAYBICHEVA, M.N., TULIN, N.A., BASTRIKOV, N.F., FEDEYEVA, N.I.

Wall blocks of electric steel-smelting furnaces made of magnesite-
chromite brick wastes. Ogneupory 25 no.4:186-188 '60.   (MIRA 13:8)
    (Firebrick--Testing)   (Chelyabinsk--Smelting furnaces)

MAMYKIN, P.S.; KAYBICHEVA, M.N.

Manufacture and performance of crucibles of induction furnaces made of magnesite with sintering additives. Ogneupory 25 no.7:308-312 '60.   (MIRA 13:8)

1. Vostochnyy institut ogneuporov.
        (Crucibles)

BARIN, Stepan Yakovlevich; KAYBICHEVA, M.N., inzh., retsenzent;
DOVGOFOL, V.I., inzh., red.; DUGINA, N.A., tekhn. red.

[Advice to the steelmaker] Sovety staleplavil'shchiku. Moskva,
Mashgiz, 1961. 37 p. (Biblioteka raoochego-mashinostroitelia.
Seriia: Peredovaia tekhnika - osnova kommunisticheskogo truda,
no.4)   (MIRA 15:6)
     (Steel—Electrometallurgy) (Smelting furnaces)